



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

ble reasons why three squabs in a nest are such unusual occurrences: First,



Fig. 27. THREE YOUNG MOURNING DOVES FROM ONE NEST, 6, 1 AND 7 DAYS OLD, RESPECTIVELY. THESE WERE TAKEN OUT OF THE ACTUAL NEST FOR PHOTOGRAPHING.

Photographed by Joseph M. Thuringer.

the ordinary dove nest is too frail to hold three birds to maturity, and secondly, the third bird may hatch so late that it is soon eliminated.

Norman, Oklahoma, July 15, 1921.

NOTES ON THE ROCKY MOUNTAIN JAY IN THE YELLOWSTONE NATIONAL PARK

By M. P. SKINNER, Park Naturalist

ALTHOUGH the Rocky Mountain Jay (*Perisoreus canadensis capitalis*) is known everywhere as the "camp robber", it shares this term with the Clark Nutcracker with which the former is thus confused; but the Nutcracker has markings of black and white on wings and tail not possessed by the jay, is a larger bird, and carries a much longer and stronger bill. After the differences are once recognized, it is not hard to distinguish these two camp birds. It is true also that the Nutcracker ranges through, and breeds in, a lower zone than the Jay.

While I have frequently found Rocky Mountain Jays in the smaller meadows and openings, still it is apparent they like the forests best. Forests of lodgepole pine, limber pine, fir, spruce, cedar, and even aspen groves and willow thickets constitute their chosen haunts. Their nests are in the lodgepole pine belt between the 7500 and 8000 foot levels. For some obscure reason these birds are rare about Mammoth, although common about Tower Falls at about the same altitude. Rummaging about the refuse of old camp sites, as well as about camps in actual use, they are distinctively a camp bird although I should think "camp scavenger" a rather more appropriate name than "camp

robber''. For they serve as scavengers, and not as robbers of the type of magpies and pack rats. At times the numerous "bear dumps'', as the localities where garbage is thrown for bears are known, attract these birds, but not enough to cause them to desert the camps entirely. Birds of the air and of the tree tops as they are, when they are on the ground they move somewhat awkwardly in a series of long hops, a little sideways perhaps, a good deal like crows and ravens.

While Rocky Mountain Jays are frequently seen on "the formations" about the hot springs and even in the Geyser Basins, it is evident they are not especially attracted there. Neither the water, nor the heat, nor the breeding insects, are of interest to these Jays.

These birds are common enough all winter about the ranger stations. In May and early June they begin visiting camps; but at that time, possibly because it is their nesting season, they are shy and sometimes indifferent to crumbs thrown out for them. Soon they become bolder, and by September are something of a pest, although they make up for this later by the touch of life they give to an otherwise cheerless and wintry landscape. At times they add very much to the amusement of a winter camp. For instance, a Jay came to my camp one snowy morning; the falling snow was too light and soft for him to walk on, but he was hungry and wanted the scraps I had thrown out. Jays are shrewd, and this one was no exception to the rule: he spread his wings whenever he wished to alight, letting his feet and body sink into the snow until the spread wings rested on the surface and supported him. True, he had a little difficulty in flying up from such a position; but after a trial or two, he seemed to acquire a knack for it.

Camp Robbers, as their nickname would imply, have bold and daring ways, especially when there is food at stake. At one camp where I remained some time I used to feed them; on the first day fifteen feet was as close as they would come; six days after that they fed unconcerned within three feet, and a day later within six inches of my hand. These were perfectly wild birds; but when I lunched one day near Apollinaris Spring, where there had been campers all summer, two Jays alighted on my head, one on my back, and one on my elbow, without any hesitation whatever.

At my Lewis Lake camp the Jays promptly came trooping in for "goodies". Two, that were a little too greedy, were soon a-fighting, and they fought each other so hard they fell to the ground and were picked up by the cook still fighting. When they found themselves caught, they squalled so loudly and piercingly as to call a dozen companions to the scene. Still, when they were released, they flew off not very much frightened and returned almost immediately.

Once I made a trip to Snake River valley "by my lonesome", and, as I unpacked, a Camp Robber and a red squirrel decided to camp, too! With marvellous unanimity they selected the same place I did! "Hello," thinks I, "here's where I shall have to watch my bacon pretty closely." I did! I saved the bacon and the frying pan, but the Camp Robber got the bacon rind and some of the grease. The Rocky Mountain Jays became so bold at DeLacey Creek camp as to enter the tents and take things off the table; one took a bit of bread from the knee of a man lying on his bed. Later I had one purloin food from a small camp table at which I was eating at the time.

Beginning on September 18, 1919, I spent a week in camp near Cold Spring, not far from the main road and within a short distance of several summer camp grounds. Four jays arrived as soon as I did, and that evening one tried to fly off with a slice of ham soaking in boiling water to remove the salt. On the morning of the 20th, I was aroused before sunrise by the scratching of jays' claws on the canvas stiffened by the night's frost. I should probably not have known what caused the disturbance, if the birds had not commenced a beseeching whine "to come out and feed us." Later during this stay, they did not wait to wake me up but came right in under the canvas where it lacked about three inches of meeting the ground. Usually I was away all day on trips in various directions; frequently I saw other Jays in the forest and even had four follow me for a mile or more along a 9000-foot ridge; the four at camp were always there when I got back, or they appeared soon after. Sometimes I found them inside the tent foraging on the floor for crumbs. The 21st of September was Sunday, and, as usual, I washed up everything in camp until the Jays stole every one of my pieces of soap! I cannot say that they ate the soap, but I do know they got away with it and hid it so effectually that I was soapless for a week. That evening at supper, a Jay tried to steal ham from the hot frying pan when I took it off to replenish the fire; another one alighted on the far end of a stick on the fire and within a foot of the blaze and actually in the smoke that was eddying about. Verily the Jays were "into everything" at that camp!

In the Yellowstone, Rocky Mountain Jays are almost always in pairs; never yet have I seen them in flocks, except for family parties. I do not think they intentionally associate with other birds; but the search for food takes them where other species, especially Nutcrackers and Black-headed Jays, are. Once I found them with Juncos, a squirrel, and two chipmunks about a little pile of oats dropped in the road. I have seen them with Red-breasted Nuthatches; and once I found two Jays and a pair of Sparrow Hawks in the last tree at timberline on Quadrant Mountain. One day, a tiny Flycatcher astonished me by vigorously scolding a Jay near my camp at Lake Outlet. Later I noted a Swainson Hawk on a big bare pine with a Camp Robber perched three feet above him, and each bird totally oblivious of the other.

The flight of a Rocky Mountain Jay seems weak. A few wing strokes carries the bird along slowly and upward slightly, then a sail carries him down at about the same angle, and this sequence is repeated over and over again, resulting in a slow flight of long, shallow undulations. As a rule, long flights are not attempted, but progress is made from tree to tree. In the autumn, this bird often precedes one from place to place especially in the late afternoon; not only along roads and trails, but I have had one fly from tree to tree on the shore while I coasted along in a canoe. I presume this custom enables him eventually to get many a supper scrap.

Most decidedly, Camp Robbers are not songsters; yet I have heard them give several musical calls from a pine top, and their whistled "ker-wheet, wheet, wheet, wheet", with increasing shrillness on each syllable, is very pleasing. In addition they have a variety of calls, mostly wheedling and coaxing, and at times approaching a continuous conversation; often the calls acquire a scolding tone. While some of the whistles are shrill, the majority are in a low tone.

In the Yellowstone, these Jays do not migrate, properly speaking; but

when the fall storms begin many of them move down the mountains to where food is more plentiful. During September and October they become noticeably abundant along the travelled roads and trails, and especially near ranger stations and camp sites recently used. During the exceptionally hard winter of 1919-1920, two or three Jays appeared at Mammoth on November 9 and remained until April 24, during that time going down to the edge of the timber at 6000 feet elevation—the lowest I have any record of seeing this species. But there are many of these birds that remain in the upper parts of the Park, even higher than their known breeding grounds. Cold, itself, is minded very little by them, with such thick, fluffy feathers.

Truly omnivorous eaters, the Rocky Mountain Jays pick up oats dropped about stables or along the roads; catch caterpillars, black worms, and grasshoppers; and once I saw a Jay try for a locust, although he missed and did not try again that I could see. About camps and lunch stops, they vie with the squirrels and chipmunks for scraps of all kinds. Very prompt at locating a camp, they often arrive as soon as I do, or at least come when I am unsaddling my horse. Having once located a camp, they remain in the vicinity as long as the camp does; for it is impossible to scare, or drive, them away. In the morning they are about before sunrise or even at dawn (at 5 A. M. on several occasions that I know of). If the camp is not awake, they soon make their presence known, greeting the inmates from the trees as they come out. They get into traps baited with cheese and set for rats in all sorts of out-of-the-way places, both outdoors and in. They are adepts at learning regular meal hours and are always on hand for their share; and usually they are ready to welcome one back at night. Often when the owners return they find the Jays in possession of their camp. If the scraps already thrown out become dry or frozen, the Jays come about coaxing for fresh supplies. Camp Robbers like wheat bread, and I have had them steal corn bread from the baking pan. Scraps of meat and fish are favorites. The birds bolt their food as fast as they can pick it up, varied by storing some away in tree crotches, behind bits of semi-detached bark, and in every conceivable nook and cranny. I do not know whether they regularly return to the stores or not, but I do know that many are treasures trove for other birds and for squirrels. One day I had baked beans, and the Jays came even under the tent canvas for them; most of the time a Jay would hastily swallow from one to three beans and then fly off with a mouthful. They really seemed to prefer beans to cold flapjack, although when I saddled up and rode away, they followed, and I imagined they were coaxing for "more flapjack"; for these birds have so many inflexions to their tone of voice that one unconsciously imagines he can tell what they are talking about. Once, during the return from early morning nature-work, a Jay flew from camp a hundred yards to meet me, and then commenced to whistle and chatter as much as to say he wanted breakfast; and then he escorted me back to camp!

Nests are built in tall lodgepole pines during early April at from 7500 to 8000 feet elevation. They are about thirty feet up, or two-thirds of the distance from ground to tree top, and made of straw placed in the angles between the trunk and a limb about two inches in diameter. The inner nest is mostly of pine needles. They are inconspicuous, and in every case the bird has left the nest as soon as I came in sight, without a sound, and hopped up limb by limb to the top of the tree, to perch there with apparent unconcern. On one

occasion, I found young birds being fed on April 11; but my usual luck was to find three eggs, which are grayish, blotched rather heavily with purplish brown about the larger end.

Yellowstone Park, Wyoming, April 11, 1921.

A TWELVEMONTH WITH THE SHOREBIRDS

By ALLAN BROOKS

IT WOULD be difficult in most localities to be able to study shorebirds during every month of the year; and the present notes owe whatever interest they may possess to the fact that changes of location made it possible for me to keep in touch with my favorite group of birds during the whole of the year 1920.

The last days of December, 1919, found me at Comox, on the east coast of Vancouver Island. The fall and early part of the winter had been of exceptional severity; even here on the seacoast there had been over twenty degrees of frost, and I hardly expected to see much in the way of Limicolae. Yet while waiting for Brant on a collection of bars some miles out to sea, large flocks of Black Turnstones, Sanderlings, and Dunlins were constantly in evidence. Among the first named, seeking their food on the stony shores instead of the tidal flats, were several Aleutian Sandpipers, one of which I secured. A large plover which was either a Black-bellied Plover or a Surfbird flew low over the water, but the sun-wash on the water made it impossible to be positive of its identity. I think, however, from its silence that it was a Surfbird. Anyway there were five different species of shorebirds on that island on that cold winter's day; and a few days later, January 2nd, I saw Killdeers and Wilson Snipe on the estuary of the Courtenay River, making seven species wintering at Comox—not bad for latitude 50°!

The first migrating shorebird arrived on April 9, a Greater Yellowlegs; and a few days later I left Comox for Masset, Queen Charlotte Islands, some hundreds of miles farther up the coast. I arrived there April 15 and as the latitude was 54° I did not expect much migration for about a month. Here a surprise awaited me; for the movement of shorebirds was in full swing before the end of April, at its height by May 7, and mostly over by the middle of that month.

The following probably all wintered at Masset, though all were not identified until May 2: Black Oystercatcher, Black Turnstone, Dunlin, Aleutian Sandpiper, and probably Sanderling. The first undoubted migrants were Greater Yellowlegs, on April 22, and Least Sandpiper April 26. Semipalmated Plover and Western Sandpiper came in on the 29th; and the next day brought Black-bellied Plover, Long-billed Dowitcher, and Surfbird, all in flocks and in high plumage.

The Surfbirds were in a flock of one hundred and fifty or more and may have arrived before, or even wintered, as I have a specimen taken here about the middle of April. They were not seen again, but all the other species got